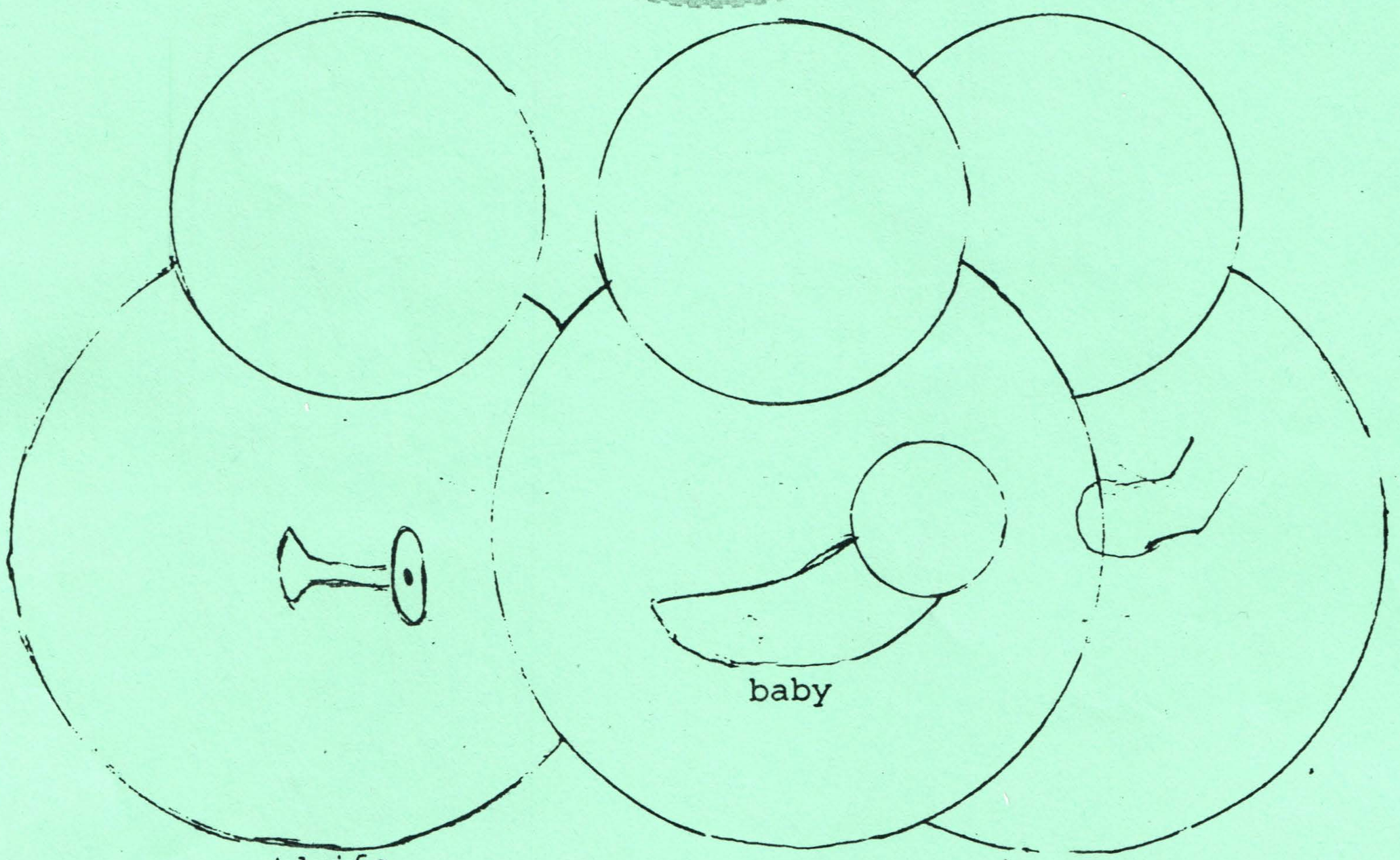
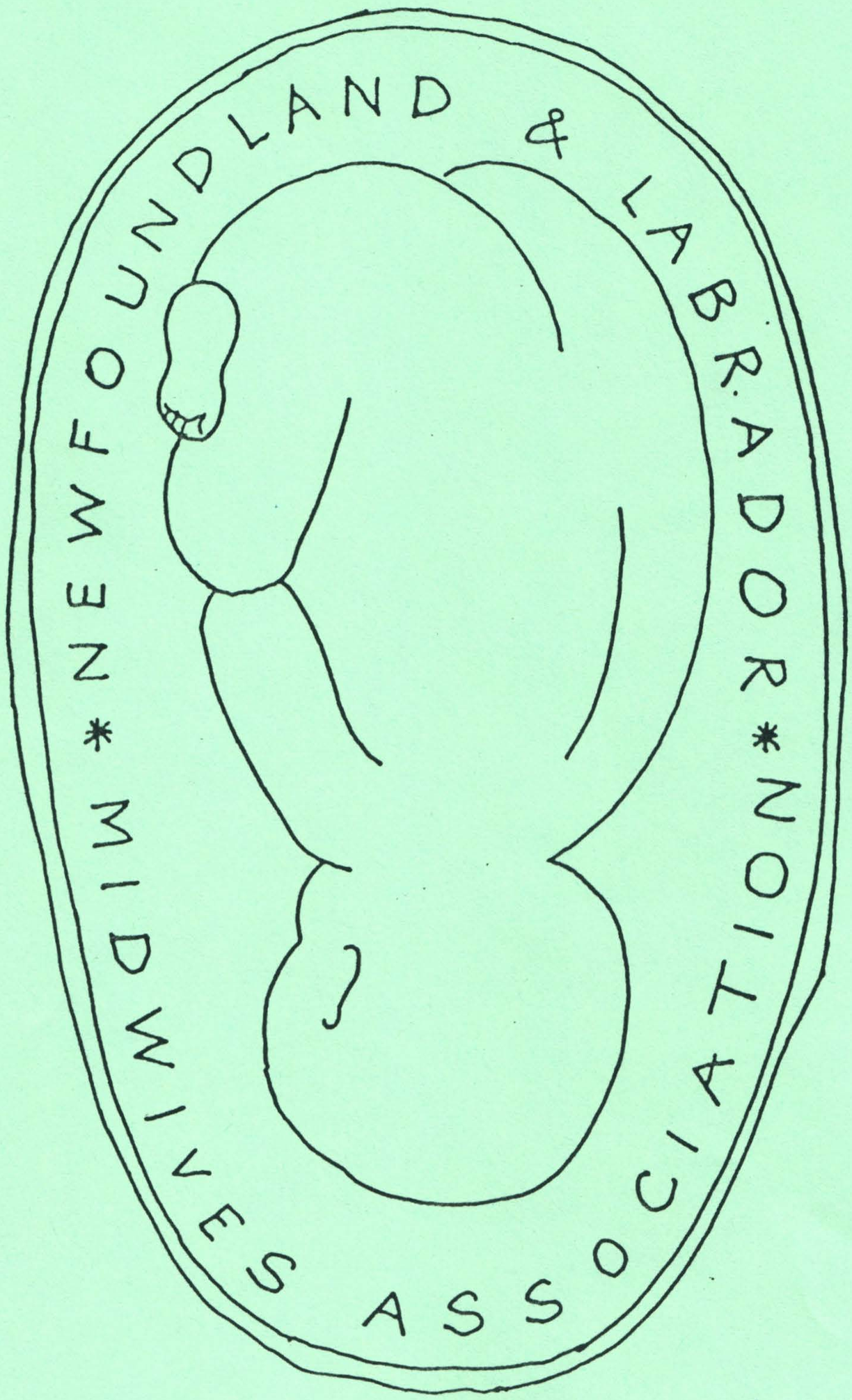
NEWFOUNDLAND & LABRADOR MIDWIVES ASSOCIATION



Newsletter No. 6, September 1998

Suggestion for a Logo



EXPLANATION: This design is intended to be simple, striking, unusual & therefore provocative. It represents normal, full term pregnancy, with the normal LOA presentation. Mother (by outline), baby, & the midwife (by name) are identified. Other potential supporters are not included, as their identity is so variable from case to case: to wit, husband, boyfriend, companion, sibling, grandparent, or absentee.

Newfoundland and Labrador Midwives Association
(Chapters in Goose Bay and St. John's)
Newsletter 6
September 1998

Summer has ended and we are now busy preparing for the Workshops. The details are given below in the report of our general meeting held by teleconference on September 2. This Newsletter includes the annual list of library acquisitions for 1997/1998 which may be of interest to members. Once again we thank Linda Barnett for compiling the information.

Thank you to those who submitted items for this Newsletter. Any items for the next Newsletter should be in by the beginning of January. Items for the Newsletter are welcomed and those who submit are responsible for obtaining permission to publish in our Newsletter. The Editor does not accept this responsibility.

Pearl Herbert, Editor, c/o School of Nursing,
Memorial University of Newfoundland, St. John's, NF, A1B 3V6 (Fax: 709-737-7037)

Natural Aspects of Childbearing Workshop, September 21 to 22, 1998
Health Sciences Centre, St. John's
Providing labour support (Kay Matthews and Robyn Beaudry); Optimal fetal positioning in pregnancy (Pamela Browne); Massaging mother in labour and newborn baby (Jean Trend); The management of breast refusal in the early days after birth (Janet Murphy-Goodridge); Developmental care of the newborn baby (Bonnie Stevens).
Registration fee: By September 11 members $60 ($35 for one day); non-members $80 ($45); After September 11 $100 ($55) for everyone. Includes lunches. For half a day $25 for everyone and no lunch. Full time students and unemployed persons $20 per day and no lunch. For registration forms and inquiries ask Pearl Herbert.
Cheque made out to the Newfoundland and Labrador Midwives Association and sent to Pamela Browne, P.O. Box 112, Station A, Goose Bay, Labrador, A0P 1S0

Maternal Health Workshop, September 14 to 15, 1998
Melville Hospital, Goose Bay
For information contact Pamela Browne

Last Call
Any further suggestions for a logo to be given to Pearl by the end of September.
Any recommendations, comments, suggestions for our Constitution and Bylaws to be sent to Pearl by the end of September.

General Meeting of the NLMA by teleconference, beginning of January 1998.
In St. John's in room 2990 in the HSC. Outside of St. John's it will be the teleconference room, so arrange with your local teleconference organizer to have you booked onto the system. For the date and time watch your notice boards, and share e-mail messages.
Items for the Agenda needed by the beginning of December.

Executive Committee

President: Pearl Herbert Secretary: Karene Tweedie
Treasurer: Pamela Browne Second Signer: Alison Craggs
Newsletter Editor: Pearl Herbert
Home page: http://www.ucs.mun.ca/~pherbert/ Newsletter in HSLibrary: WQ 160 N457n

General Meeting, September 2, 1998 was held on teleconference with members present in St. John's, Goose Bay, and Nain. We would love to have members from other sites join us for these meetings as they are on the general teleconference system for the whole province.
Pearl thanked the Association for paying the travel expenses so that she could attend the four different events in Toronto - CCM agm, Ontario Midwifery Education Programme invitational workshop, AOM annual conference, AOM Emergency Skills Workshop (as reported in the June Newsletter). This is the last month in which to submit suggestions for a logo, and for the Constitution and Bylaws. There was nothing new to report about midwifery in this province; but we have not given up hope!
There was a discussion about who should develop an Emergency Skills programme for midwives in this province. Pamela Browne and Ann Chaulk in Goose Bay and Kay Matthews in St. John's are going to discuss this further at the time of the Goose Bay workshop and then we are planning a meeting in St. John's, probably September 21 when Pamela and Ann are here for the workshop. The time will be announced at the Workshop. Please let Pearl know if you are interested but are unable to attend the St. John's workshop so that you can be advised.
Our home page now has a record of the "number of hits" and for the first month there were 11.
There was time spent on discussing the workshop in St. John's. The registration fees for students, unemployed persons, and for those who wish to attend a half day i.e. to hear Bonnie Stevens, are shown on page 1.
The Health and Community Services in the St. John's Region have a Community Investment Fund for proposals for projects to address gaps in support or service in the Region. We were sent a letter giving us an opportunity to apply by October 1 for funding for a project.. As we have previously lobbied with Friends of Midwifery, and as midwifery is a gap in service in this area, we invited Friends of Midwifery to join us. We had a meeting on September 1, and a suggestion is that we develop a project using case studies to show the gap in service and why women pay for midwives to attend them during birth; which in this Region has to be a home birth attended by midwives from outside of the province. (Midwives are not permitted to deliver babies in the hospital, and the ARNN position is that midwives who are nurses only attend home births with a physician). Our next meeting is planned for September 16.
Pearl will be representing midwives at the Canadian Perinatal Surveillance Systems steering committee meeting in Ottawa on September 25; at the Breastfeeding Committee for Canada meeting in Vancouver from November 18-21. The next Canadian Confederation of Midwives general executive meeting in November 5 by teleconference. Let her know if there are any items for these meetings.
Pamela reported that a breastfeeding project is being carried out in Labrador where 3,000 women will be interviewed. It will be interesting to compare the results with those found in the large provincial longitudinal randomized study carried out five years ago. The Labrador results are reported in: McKim, E., Laryea, M., Banoub-Baddour, S., Matthews, K., Webber, K. (1998). Infant feeding practices in coastal Labrador. *Journal of the Canadian Dietetic Association, 59*(5), 35-42.

<u>Maternal Drugs and Breastfeeding</u> by Jack Newman, MD, FRCPC, submitted by Pamela Browne following a national teleconference presentation on February 3, 1998. (Dr. Newman has been contacted and has given permission for this to be distributed). Dr. J. Newman, Hospital for Sick Children, 555 University Avenue, Toronto, ON, M6P 3H6 (Telephone: 416-813-5757 (option 3); Fax: 416-963-5499; E-mail: newman@globalserve.net).

<u>Introduction</u>. It is not easy to breastfeed in North America in the 1990s - perhaps easier than in the 1970s, but still not easy. We live in a culture which intrinsically understands bottle feeding, rather than breastfeeding, as the norm. Health professionals usually lack the practical knowledge to help mothers breastfeed and overcome problems which often arise precisely because of that lack of practical knowledge. Health professionals, are sometimes reluctant to give pregnant women and new mothers information about the risks of artificial feeding for fear of "making new mothers feel guilty for not breastfeeding". At the same time, parents-to-be and new parents are bombarded by formula company samples and advertising, encouraging early supplementation and cessation of breastfeeding. Most of the mothers presenting at the breastfeeding clinic have received mailings of infant formula and advertising, some from as many as four different companies *before* the baby was even born.

Most women have an abundant milk supply (and determination) and many manage, despite all odds, to breastfeed successfully. It is thus doubly frustrating that, if a mother needs to take medication, she is often told, either by the prescribing physician, or the pharmacist, or both, that she must suspend breastfeeding temporarily. Not only is this rarely necessary, but also "temporary" suspension of breastfeeding often turns out to be permanent. It appears that few health professionals truly understand the pharmacology of drugs and lactation. They are rarely, if ever, supported in encouraging the continuation of breastfeeding by the *Compendium of Pharmaceutical Specialities (CPS)* which seems to contraindicate breastfeeding for most medications. The drug companies, somewhat hysterical about their medico-legal risks, prefer to state that their drug should not be used during lactation. In so doing they completely ignore the risks of artificial feeding, and these risks are not insignificant. However, despite the misguided and misinformed recommendations of the manufacturers regarding the use of their drugs during lactation, some useful information may be obtained from the *CPS* in which there is a section entitled "Drug Exposure during Lactation" which offers a more enlightened approach (1). In addition, even in the white pages, the pharmacokinetics section sometimes provides valuable information (protein binding, oral bioavailability, plasma drug levels, whether the drug is metabolized to *active* metabolites and occasionally even the volume of distribution of the drug) which allows the health professional to choose the best drug for the breastfeeding mother (see below). As well, every few years the American Academy of Pediatrics publishes a list of drugs and whether or not they believe these drugs are compatible with breastfeeding (2).

<u>Infant Formula as a Drug</u>. The risks of not breastfeeding continue to be documented, and new information is constantly becoming available (a seven page list of references on the risks of formula feeding is available on request to Dr. Newman). It should be noted that despite the claims of the formula manufacturers, infant formula is only superficially similar to breastmilk. There is no lack of texts available comparing the constituents of infant formula and breastmilk (Table 1, and bibliography).

Do these differences in composition make a difference in an affluent society? They do (3-10). It may be argued that some or perhaps even many of these studies are flawed, and that would be correct. But very few medical studies are not flawed. If only a fraction of the evidence

available on the risks of formula feeding were available there is little doubt what treatment would be used. Yet many health professionals do not make the logical step of taking into consideration the risks of artificial feeding when they prescribe medication for the nursing mother.

It is rare that breastfeeding need be suspended when mothers are put on medication. The risks to the mother and baby are almost always less if the mother continues breastfeeding while taking medication.

Pharmacology of Drugs and Lactation.. It would appear that many health professionals believe that the baby "gets what the mother gets". This is true in one sense if we mean that almost all drugs taken by the mother appear in the milk. But this is not true if we mean that the baby gets a dose of the drug comparable to the mother's. As a rule of thumb, **the baby will get about 1% of the total maternal dose of any drug**, though there are variations. In fact, with most drugs, the baby will get less than 1% of the total maternal dose. Using this rule of thumb, a mother taking 500 mg t.i.d. of amoxycillin*[1] would pass on to her baby only 15 mg of amoxycillin over the 24 hour period, hardly enough to worry a single E. coli bacterium, given the likely concentration of the amoxycillin in the baby's gastrointestinal tract. In fact, data on the transfer of amoxycillin to the baby indicates that the baby will receive <0.7% of the total maternal dose (1). The main reason for this is that it is the **concentration of drug in the maternal plasma** which determines the amount that the baby gets. For most drugs, the mother is taking milligram doses. But the concentration achieved in her plasma is usually measured in micrograms or even nanograms per millitre. Furthermore, many drugs are highly protein bound, and it is only the unbound portion which is available for excretion into the milk. For example, cisapride* (Prepulsid), used in a dose of 60 mg/day in nursing mothers results in an average maternal plasma level of 137 ug/L but, partly because cisapride is about 98% protein bound, milk levels of only 6.2 ug/L were achieved in the milk (12). Thus a baby taking 1 litre of milk a day would get only 6.2 ug in a 24 hour period, much less than the dose of cisapride usually prescribed for babies (0.6-1 mg/kg/day divided t.i.d.-q.i.d., or at least 2.4 mg/24 hours for a 3 kg baby, or almost 400 times more than one would expect in the milk).

Certain drugs with **large molecular weights** are not even excreted into the milk as they are too large. Some examples are heparin, insulin and interferon.

The **oral bioavailability** is also a very important factor in the consideration of which drug may be the best choice. Drugs with low oral bioavailability in adults usually have low oral bioavailability in babies as well. For examples, less than 1% of gentamicin taken orally is absorbed from the gastrointestinal tract. It is for this reason that gentamicin is given by intramuscular or intravenous injection. Omeprazole (Losec) an inhibitor of gastric acid secretion is not only highly protein bound (about 95%) but also is incompletely absorbed through the gastrointestinal tract. It is highly acid labile and the mother will generally absorb about 30-40% of the oral dose (13). The milk levels are low, and of the amount that is excreted into the milk a significant amount will *not* be absorbed by the baby.

Another factor of importance is **the volume of distribution** of a particular drug. Low maternal plasma levels are usual when the mother ingests a drug with a large volume of distribution. An example is paroxetine (Paxil) and SSRI type of antidepressant - less than !% of the drug in the mother's body is in the plasma compartment. This does mean that the mother's

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[1]*Drugs marked by an asterisk are considered compatible with breastfeeding in the American Academy's list (2). Drugs not so marked have, for the most part, not been reviewed

blood (and milk) will continue to have detectable levels for some time after she stops taking paroxetine, but it also means that the milk concentration remains very low (14). Incidentally, paroxetine is highly protein bound in the mother's plasma (95%+), and little gets into the milk anyhow. The milk-plasma ratio has been worked out to be about 0.09, very low indeed, and a strong argument that paroxetine would be safe to use in breastfeeding mothers for the treatment of depression. This high volume of distribution, however, may make this drug of concern for use during pregnancy, because though maternal blood levels will be low, it does pass the placenta, and may distribute in significant quantities to the baby's brain and other tissues.

The **milk-plasma ratio**, often discussed but often misinterpreted, is useful information if it can be obtained. Unlike protein binding, for example, this information is rarely given in the *CPS*. A low milk-plasma ratio (one or less) is of course preferred, but even if the milk-plasma is high concentration of the drug in the milk does not necessarily render that drug unsafe during lactation. Even with a high milk-plasma ratio of say 5, 5 times a very low concentration in plasma (which is usual) does not make for a high concentration in the milk.

It is evident that drugs with shorter **half lives** are preferable to those with longer half lives.

The shorter the half life the less drug will get into the milk, all things being equal, and the less likely the drug will accumulate in the baby since even small amounts which accumulate with time may result in toxic effects.

<u>Suggested Approach to Using Drugs in Breastfeeding Mothers</u>. In the vast majority of situations, breastfeeding may continue, but the effects of maternal medication use on the breastfeeding baby may be minimized by considering the following when prescribing.

1. **Use medication only when indicated.** This principle of therapeutics, not as often honoured as it should be, is true not only for breastfeeding mothers. Nevertheless, all too often women are asked to interrupt breastfeeding when they are prescribed medication they do not need and should not be getting. And, incidentally, for which they do not have to stop breastfeeding.
2. **Medication which is used for infants is safe during breastfeeding.** Based on the rule of thumb that the baby will get approximately 1% of the total maternal dose, it is apparent that the amount the baby will get through the milk is very small compared to the amount the baby would get if treated directly.
3. **Medication which is considered safe during pregnancy is often safe during lactation is not necessarily true.** Since the mother is metabolizing the drug for the fetus, and thus accumulation of drug will not usually occur in the fetus. However, if the issue is whether *any* exposure is of concern, then the baby will usually get much less drug, at a less sensitive time during breastfeeding than during pregnancy. Any psychoactive drub (anti-depressants, anti-epileptics) would fall into this category.
4. **Some drugs have active metabolites**. For example, meperidine (Demerol) and fluoxetine (Prozac) both have active metabolites which have long half lives. All things being equal, other drugs which do not have active metabolites would be preferred. Morphine can usually be substituted for meperidine; sertraline (Zoloft) or paroxetine (Paxil) for fluoxetine. None of the aforementioned substitutions have significant active metabolites. This information is frequently available in the *CPS*. It is of interest that for

some reason meperidine seems the drug of choice of many physicians for analgesia during labour. From the point of view of the baby, it is probably the *worst* choice given its documented effects on infant behaviour and nursing (15) and its long half life and its active metabolite.

5. **Use information on pharmacokinetics to make the safest choice**. When a choice is available use the drug with the highest plasma protein binding, the lowest plasma blood levels, lowest oral bioavailability, lowest milk-plasma ratio, shortest half life, and the least toxicity. Drugs which are applied to the skin, to the eye, or in the vagina rarely achieve significant blood levels and are even less likely to achieve detectable milk levels. Many inhaled drugs (salbutamol, steroids) are poorly absorbed from the respiratory mucosa and are safe while breastfeeding.
6. **Be flexible**. Breastfeeding is too important for the health and well being of the mother and baby to sacrifice on the altar of ignorance. If a drug is worrisome, it is rare that no safer choice is available. Physicians have a tendency to prescribe the newest, hottest (and most expensive) drugs. Often older drugs are as good therapeutically, and more information is available with regard to their safety during lactation. If no drug is available which is easy to use, there are still options. If you cannot convince yourself that warfarin is safe during lactation; when in fact it is as very little gets into the milk because of low blood levels and very high protein binding, then give the baby small doses of oral vitamin K from time to time as warfarin is a vitamin K dependent factor antagonist. This is not necessary but it is certainly preferable to discontinuing breastfeeding. A common situation occurs as well when a new mother has a urinary tract infection and the organism is sensitive only to ciprofloxacin and gentamicin. Ciprofloxacin is *not* contraindicated during breastfeeding, because the concern about arthropathies in young animals has been shown to be baseless in humans (16). Nevertheless, the mothers have often been convinced that they cannot take this drug and continue breastfeeding. In such cases, we have taught the fathers to inject the gentamicin at home, or have brought in home-care or some similar agency to give the injections. If the mother needs to continue hypoglycemic agents after delivery why not continue with insulin, even though the majority of the oral agents do not get into the milk in significant quantities (for example glyburide with a protein binding of 99%)? Many mothers would be willing to continue injections, especially since it is rarely necessary to continue more than a few weeks.
7. **The mother has the right to make the final decision**. Regardless of the health care professional's beliefs, it is unfair and unprofessional to coerce the mother into stopping breastfeeding by exaggerating the risks of continuing breastfeeding and not discussing the risks of formula feeding, or by threatening to withhold necessary medication. Especially since the bulk of evidence now supports the fact that there is rarely any significant risk in continuing breastfeeding while taking most medication while the risks of formula feeding are not negligible. The mother should be given the information at the base of the prescriber's concern, but also phone numbers or other resources where she can get more information. In general, the conservative approach is to continue breastfeeding while taking a medication, until more information can be obtained.
8. **Some Specific Examples**:
    a. **Antibiotics**. Antibiotics are among the most commonly prescribed drugs for nursing mothers. Almost no antibiotic can really be said to be contraindicated during breastfeeding. As with other drugs, the amount that gets into the milk is very small. Sensitization is possible, though unlikely, and less of a concern than

sensitizing a baby to cow milk or soy protein. The doses involved are unlikely to change the flora of the baby's gut, but there is no doubt that changing from breastmilk to artificial feeding does indeed change the flora of the baby's gut (17).

i. **Ciprofloxacin** has been on the list of "no-no's" for breastfeeding since it was released, based on arthropathies produced in young animals, not humans. However, this concern has been shown to be baseless in humans (16).

ii. **Tetracycline*** is a good example of how a drug which is contraindicated for children is *not* contraindicated during lactation. The pharmacology is different. The amount that gets into the milk is very small, the milk-plasma ratio being 0.6 to 0.8 with milk levels ranging from 0.43 mg/L to 2.58 mg/L when the mothers were taking 500 mg q.i.d. (13). However, even this tiny amount is not absorbed. Whatever tetracycline gets into the milk binds to calcium and so is not absorbed.

iii. **Metronidazole**. The lilac pages of the *CPS* unequivocally state that metronidazole is *not* contraindicated during breastfeeding (1).

iv. **Fluconazole** does appear in the milk in greater amounts than the other commonly used antifungal agent, ketoconazole. As fluconazole is used most commonly as a single dose to treat vaginal candidiasis it would not be a concern for the nursing infant and not be necessary to suspend breastfeeding. When used to treat nipple candidiasis longer courses of treatment are necessary, and the fact that it does enter the milk in greater quantities is desirable. The infant would not get enough through the milk to treat any candidal infection. Note that the manufacturer now produces a paediatric formulation of fluconazole *for the treatment of simple thrush.*

v. **Others**. Many antibiotics are not absorbed from the gastrointestinal tract in significant quantities (gentamicin, ceftriaxone, cefoxitin, cephalothin, and many others). Thus they are compatible with continued breastfeeding.

b. **Antihypertensives**

i. **Beta blockers**. Most beta blockers are compatible with breastfeeding. Serum levels of propranolol* are quite low, oral bioavailability about 30% and the milk-plasma ratio low as well. It has been reported that a baby would likely receive <0.1% of the maternal dose (13). Labetalol* also results in very low intake for the baby (as low as 0.004%-0.07% of the maternal dose)(13). Caution should be exercised with acebutolol*, nadolol* and atenolol*. Though probably safe to use during breastfeeding they do result in a greater percentage of the drug getting to the baby than propranolol. Significant beta blockade has been reported in one infant whose mother took atenolol (18). Since there is no advantage of these latter over other beta blockers, propranolol and labetalol should be prescribed for breastfeeding mothers if a beta blocker is required.

ii. **Calcium channel blockers**. Most of the calcium channel blockers are compatible with continued breastfeeding. Most are characterized by having high protein binding, maternal blood levels in the microgram range and relatively low oral bioavailability. Nifedipine, nicardipine, nimodipine, all follow this pattern. Verapamil results in very low milk levels and undetectable blood levels in the infant.

iii. **ACE inhibitors (Angiotensin-Converting Enzyme inhibitors)**. The data tend to suggest that ACE inhibitors result in low maternal blood levels, and very low amounts are transmitted to the baby. Benazepril is strongly bound to plasma protein and its oral bioavailability is low (13). It should be safe as it has been estimated that the baby will receive <0.1% of the maternal dose. Captopril* has long been used in children. Though it is weakly bound to plasma protein it has an oral bioavailability which is relatively low and a low milk-plasma ration (0.012). It has been estimated that a baby will receive 0.002% of the maternal dose (13). Although data so far suggest the baby will receive only insignificant amounts of enalapril* its metabolite's long half life would not make it the preferred ACE inhibitor (13).

iv. **Other antihypertensives**. Hydralazine*, often used in infants, results in very low maternal blood levels (1500 nanograms/L) and low infant intake (about 0.17 mg in 24 hours). Methyldopa*, results in insignificant milk levels, and by interfering with dopamine synthesis, may even have the side effect of increasing the maternal milk supply. Thiazide diuretics (for example hydrochlorothiazide*) generally appear in the milk in insignificant quantities. The idea that diuretics would decrease milk supply has never been demonstrated.

c. **Antidepressants**. Postpartum depression, as with other depression, is frequently treated with antidepressant medication. Unfortunately, women are usually told they must stop breastfeeding while on these medications. Many women placed in a situation of having to stop breastfeeding in order to treat severe depression are overwhelmed by yet another loss in their life - the loss of the breastfeeding relationship with their babies or toddlers. This is not necessary.

i. **Tricyclics**. Most of the tricyclic antidepressants are compatible with continued breastfeeding. Usually slow onset of action and side effects in the *mother*, but not the baby, limit their use. A recent review stated "Amitriptyline, nortriptyline, desipramine, clomipramine, doxiepin and sertraline (not a tricyclic (see below)) were not found in quantifiable amounts in nurslings, and no adverse effects were reported" (19).

ii. **Selective seratonin reuptake inhibitors**. Although many mothers have taken fluoxetine (Prozac) both during pregnancy and lactation without any apparent long term problems to their infants, there are now two antidepressants of this family which would be preferred. Sertraline (Zoloft) because levels were undetected in breastfeeding infants (19) and because studies on infants showed no pharmacologic effect (20), and paroxetine (Paxil) because of its large volume of distribution and strong protein binding. These would be preferred to fluoxetine which does result in absorption by the baby of approximately 3% of the maternal dose.

iii. **Lithium**. This drug does present a real problem. On the one hand it may get into the milk in significant amounts. The side effects of lithium for the baby, though documented, have been associated with *higher* blood levels achieved in the baby. On the other hand, the risks of *not* breastfeeding need to be weighed against the risks of the medication. By following the infant's blood levels and monitoring possible side effects, it *is* possible to continue breastfeeding while the mother is taking lithium (G. Koren, personal communication).

d. **Oral Contraceptives** do not result in any problems for the nursing infant because of secretion of hormones into the milk. These, as for almost all drugs, appear in the milk in only minute quantities. The problem with oral contraceptives, particularly estrogen containing ones, is that there is a tendency for the milk supply to decrease, often significantly. This does not necessarily occur in all women, and later they are prescribed the less the effect, but well documented, serious decreases in milk production have occurred even 4 to 6 months postpartum. If oral contraceptives are *required* progestin only pills should be used. In passing, it should be noted that breastfeeding alone is a good method of child spacing. When *all* the following circumstances occur, the risk of pregnancy is about the same as with oral contraceptives (2% failure rate):

1. The baby is breastfeeding *exclusively*, or virtually exclusively.
2. There are no long periods (>4-6 hours) when the baby is not nursing.
3. The baby is younger than 6 months of age.
4. The mother has not had a normal menstrual period.

Thus the need for oral contraceptives should be carefully evaluated. Given the protection offered by breastfeeding they can be started later than the "usual" 6 weeks postpartum. Barrier methods are often acceptable alternatives, but if not, a progestin only pill should be used. If a combination type pill is used, it should be begun as late as possible, preferably once the child is eating food, since if a decrease in milk production occurs the mother can make up for it by increasing food intake by the baby.

e. **Recreational Drugs and Drugs of Abuse**

i. **Alcohol** is much like any other drug. It appears in the milk in only small quantities because blood levels are usually low. In many jurisdictions a blood alcohol level of 0.08% is the limit which determines legal impairment. Yet, if the mother has a blood level of 0.08% her milk level will also be 0.08%. This is very unlikely to be significant. Mothers who drink moderately should not be discouraged from breastfeeding.

ii. **Tobacco** use is often cited as a reason for advising women not to breastfeed. This is misguided. Of course, encourage them to cut down if possible, but if they cannot, there is good evidence that the baby is healthier if the mother breastfeeds than if she does not breastfeed (21).

iii. **Marijuana and other Illegal Drugs**. What can be said for alcohol and tobacco can also be said for marijuana and other illegal drugs. If use is only occasional it is better to encourage continued breastfeeding, and indeed, the many reasons to encourage breastfeeding still pertain. Hardened, regular drug users rarely breastfeed, but if the woman does express a desire to breastfeed she must not, in my opinion, be offered only the "quit before you breastfeed" approach. Having a child and especially *nursing a child* is a life changing experience for many women. Breastfeeding can also change a woman's approach to life. Indeed, we owe it to these women to give them a chance to turn their lives around. If they maintain their habits, the child is in a very high risk situation for abuse, neglect, illness and death, regardless of how they feed. In such a situation breastfeeding is not *less* important; it is *more* important.

f. **Other Situations**. Most drugs given during general anaesthesia are not contraindications to breastfeeding, and the mother can nurse as soon as she is awake and up to it (22). "Routines" which demand her waiting for 24 hours are based on ignorance, not on the pharmacology of the drugs used.
Most radiological procedures are not contraindications to breastfeed. There is no rational reason for interrupting breastfeeding after an intravenous pyelogram, CT scan, or MRI scan, even when contrast is used. Most radioactive scans do require a short period of interruption of breastfeeding, but in most cases 12 to 24 hours are more than sufficient to avoid any radiation dose to the baby. It is best to avoid such tests in breastfeeding women. A thyroid scan does contraindicate breastfeeding, usually for several days or even weeks, depending on the isotope. The usual reason for its use in new mothers, is to differentiate postpartum thyroiditis from Grave's Disease. A scan does not need to be done at all for this reason (Dr. Robert Volpe, personal communication). On the other hand, a thallium scan does not require *any* interruption of breastfeeding at all (23).

Summary. It is impossible in this forum to discuss all possible situations and drugs which may be used in breastfeeding women. Breastfeeding confers significant benefits for the mother and child. Interrupting breastfeeding even temporarily may expose the child and mother to significant side effects of artificial feeding, and temporary interruption unfortunately often becomes permanent. On the basis of risk: benefit analysis, it is rare to have to stop breastfeeding because of maternal medication. Even though the vast majority of medications are compatible with breastfeeding, a knowledge of the pharmacology of the drugs available allow the physician to choose the drug which will result in the least exposure of the baby.

Table 1. *Some* constituents of breastmilk not present in infant formulas; other constituents present in formula often have poor bioavailability. Many constituents interact with others to produce specific physiologic effects, while some have more than one function.

Immune Factors: Secretory IgA; IgG; IgM; IgD; IgE; living macrophages; living T and B lymphocytes; interferon; complement; alpha-fetoprotein; bifidus factor; properdin; antistaphylococcal factor; chemotactic factors; migration inhibitory factor; fatty acids; lysozyme; lactoferrin; B12 binding protein; transferrin; oligosaccharides; mucin; interleukins; tumor necrosis factor alpha.

Hormones, Growth Factors, Enzymes: Epidermal growth factor; prostaglandins; lipases; proteases; amylases; relaxin; gonadotrophins, corticosteroids; neurotensin; prolactin; erythropoietin; bile salts.

References

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13. Hale, T. *Medications and mother's milk.* Sixth edition. Pharmasoft Medical Publishing, Amarillo, Texas, 1997.
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17. Yoshioka, H., Isekl, K.I., & Fujita, K. Development and differences of intestinal flora in the neonatal period in breastfed and bottle fed infants. *Pediatrics, 72*, 317-319, 1983.
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19. Wisner, K.L., Perel, J.M., & Findling, R.L. Antidepressant treatment during breastfeeding. *American Journal of Psychiatry, 153*, 1132-1137, 1996.
20. Epperson, C.N., Anderson, G.M., & McDougle, C.J. Sertraline and breastfeeding. *New England Journal of Medicine, 336*, 1189-1190.
21. Yue Chen. Synergistic effect of passive smoking and artificial feeding on hospitalization for respiratory illness in early childhood. *Chest, 95*, 1004-1007.
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23. Johnston, R.E., Muherji, S.K., Perry, J.R., & Stabin, M.G. Radiation dose from breastfeeding following administration of thallium-201. *Journal of Nuclear Medicine, 37*, 2079-2082, 1996.

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Lawrence, R. A. (1994). *Breastfeeding: A guide for the medical profession* (4th ed.). St. Louis: Mosby Year Book.

Riordan, J., & Auerbach, K.G. (Eds.). (1993). *Breastfeeding and human lactation.* Boston: Jones & Bartlett.

Other papers by Dr. Jack Newman may be found on the internet at:
http://www.erols.com/cindyrn/drjack0.htm
(Note that 0 is a number not a letter)
Cindy, RN, IBCLC, has put this index together and the various articles may be accessed, and printed for future reference.

Books and Article Have you read?

Kirkham, M. (1996). *Supervision of midwives*. Cheshire, UK: Books for Midwives Press. This is an edited book and includes the history of the supervision of midwives in Nottingham from 1948 to 1972. A manager does not practise midwifery but a supervisor is a practising midwife, who should have appropriate seniority. Although the supervisor may not be present at the birth she facilitates care by the midwife to the woman. Good supervision enables effective communication, promotes a positive working relationship and improves and maintains standards of practice and care.

MacArthur, C., Lewis, M., & Knox, E. G. (1991). *Health after childbirth. An investigation of long term health problems beginning after childbirth in 11701 women.* London, UK: HMSO. This is a British book which describes a study of postpartum health problems which were new and lasted more than 6 weeks. To obtain the appropriate sample size data were collected from mothers giving birth between 1978 and 1985 at one maternity hospital. The mothers completed a questionnaire. Epidural anaesthesia was found to result in spinal axis syndrome thought to be due to postural positioning and no movement in prolonged labour. The mothers may have considered haemorrhoids were bowel upsets. Many mothers had problems but only 34% of those with problems visited their family doctor, and only 5% of these were referred to specialists. For example, women with hypertension in pregnancy who still had it in the postpartum were given "pills" by their doctor and not referred. There are many tables for the various variables considered. Childbirth is considered to cause some morbidity and the recommendation is that systematic information needs to be collected on the types of longer term postpartum problems described in the study.

Johnson, P. G., & the Midwifery Research Project Group. (1998). Midwife and nurse-midwife. The effect of title on perception and confidence in services provided by professional midwives. *Journal of Nurse-Midwifery, 43*(4), 296-304.
Using telephone interviews students asked 200 individuals living in four American States 56 questions. As well as assessing the awareness of the terms midwife and nurse-midwife, the services provided by these two types of midwives and confidence in having these services provided were also examined. It was found that "there is a great deal of confusion over the role of both midwife and nurse-midwife. . . . People are largely unsure of what midwives and nurse-midwives do and where they do it. . . . Equal percentages of individuals expressed confidence in midwives and nurse-midwives. Perhaps the most important finding in the survey was that so many individuals were unsure of the complete role of both midwives and nurse-midwives" (p.304)

Update of the Memorial University Library Resources for 1997/1998

The annual list of Resources of particular interest to members of the Midwives Association. This is the fourth up-date since the original list covering materials obtained in the previous 10 years was printed in the Newsletter in 1994. Additions for the past year were then printed in September 1995, September 1996, September 1997, and now in September 1998. We have to thank Linda Barnett of the Health Sciences Library for retrieving the information for us. The items have not been checked, and so for some of those listed the author may have used terminology in other than a physiological sense.

Childbearing

American Academy of Pediatrics. (1997). Guidelines for perinatal care.
Call number: WQ 210 G955 1997 LOCATION: HEALTH SCIENCES

Beischer, Norman A, Eric V. Mackay, & Paul Colditz. (1997). Obstetrics and the newborn : an illustrated textbook..
CALL NUMBER: WQ 100 B41O 1997 LOCATION: HEALTH SCIENCES

Burroughs, Arlene. (1997). Maternity nursing : an introductory text.
CALL NUMBER: WY 157.3 B972M 1997 LOCATION: HEALTH SCIENCES

Cochrane Library computer file from 1997. Quarterly update.
CALL NUMBER: Periodical/Reference LOCATION: HEALTH SCIENCES

Coles, Robert, Robert E. Coles, Daniel A. Coles, & Michael H. Coles. (1997). The youngest parents : teenage pregnancy as it shapes lives / photographs by Jocelyn Lee and John Moses.
CALL NUMBER: HQ 759.64 C65 1997 LOCATION: QEII

Dalton, Katharina with Wendy M. Holton (1996). Depression after childbirth : how to recognize, treat, and prevent postnatal depression.
CALL NUMBER: WM 171 D152D 1996 LOCATION: HEALTH SCIENCES

Davis-Floyd, Robbie, & Carolyn F. Sargent. (Eds.). (1997). Childbirth and authoritative knowledge : cross-cultural perspectives / with a foreword by Rayna Rapp.
CALL NUMBER: GT 2460 C37 1997 LOCATION: QEII

Edin, Kathryn, & Laura Lein. (1997). Making ends meet : how single mothers survive welfare and low-wage work.
CALL NUMBER: HQ 759.915 E34 1997 LOCATION: QEII

Furedi, Ann. (1996). Unplanned pregnancy : your choices : a practical guide to accidental pregnancy
CALL NUMBER: WQ 200 F983U 1996 LOCATION: HEALTH SCIENCES

Gilbert, Elizabeth Stepp, & Judith Smith Harmon. (1998). Manual of high risk pregnancy & delivery (2nd ed.).
CALL NUMBER: WY 157 G464M 1998 LOCATION: HEALTH SCIENCES

Gilstrap III, Larry C. & Sebastian Faro. (1997). Infections in pregnancy.
CALL NUMBER: WQ 256 I434 1997 LOCATION: HEALTH SCIENCES

Gottlieb, Gilbert. (1997). Synthesizing nature-nurture : prenatal roots of instinctive behavior.
CALL NUMBER: QL 696 A52 G67 1997 LOCATION: QEII

Harris, Irving Brooks. (1996). Children in jeopardy : can we break the cycle of poverty?
CALL NUMBER: HV 741 H338 1996 L0CATION: QEII

International Food Information Council. (1992). What you should know about Aspartame.
CALL NUMBER: [Computer File] LOCATION: QEII

Janus, Ludwig. (1997). The enduring effects of prenatal experience : echoes from the womb / translated by Terence Dowling.
CALL NUMBER: BF 719 J3613 1997 LOCATION: QEII

Koren, Gideon, M. Lishner, & D. Farine. (Eds.). (1996). Cancer in pregnancy : maternal and fetal risks.
CALL NUMBER: WQ 240 C215 1996 LOCATION: HEALTH SCIENCES

Loftus, Christopher M. (Ed.). (1996). Neurosurgical aspects of pregnancy.
CALL NUMBER: WQ 240 N495 1996 LOCATION: HEALTH SCIENCES

Lowdermilk, Deitra L., Shannon E. Perry, & Irene M. Bobak. (1997).
Maternity & women's health care
CALL NUMBER: WY 157.3 M425 1997 LOCATION: HEALTH SCIENCES

March of Dimes Birth Defects Foundation. (1997). StatBook : statistics for monitoring maternal and infant health.
CALL NUMBER: WA 900 AA1 M315 1997 LOCATION: HEALTH SCIENCES
CALL NUMBER: WA 900 AA1 M315 1993 LOCATION: HEALTH SCIENCES

Maynard, Rebecca A. (Ed.). (1997). Kids having kids : economic costs and social consequences of teen pregnancy
CALL NUMBER: HQ 759.64 K53 1997 LOCATION: QEII

National Council of Welfare (Canada). (1997) Healthy parents, healthy babies : a report.
CALL NUMBER: WA 320 N277H 1997 LOCATION: HEALTH SCIENCES

Newfoundland and Labrador Centre for Health Information. (1998).
Live births in the Province by health region, 1995.
CALL NUMBER: HB 940 N4 L56 1995 LOCATION: HEALTH SCIENCES

Oakley, Celia. (1997). Heart disease in pregnancy.
CALL NUMBER: WG 210 H435 1997 LOCATION: HEALTH SCIENCES

Pernick, Martin S. (1996). The black stork : eugenics and the death of "defective" babies in American medicine and motion pictures since 1915.
CALL NUMBER: HQ 755.5 U5 P452B 1996 LOCATION: HEALTH SCIENCES

Pickett, Olivia K., Eileen M. Clark, & Laura D. Kavanagh. (Eds.). (1994). Reaching out : a directory of national organizations related to maternal & child health.
CALL NUMBER: WA 22 AA1 R281 1994 LOCATION: HEALTH SCIENCES

Salter, Robina. (1997). Hannah : a midwife's tale.
CALL NUMBER: PS 8587 A466 H24 1997 LOCATION: CNS

Schatz, Michael, Robert S. Zeiger, & Henry N. Claman. (Eds.). (1998). Asthma and immunological diseases in pregnancy and early infancy.
CALL NUMBER: WD 300 A853 1998 LOCATION: HEALTH SCIENCES

Smith, Margaret Charles, & Linda Janet Holmes. (1996). Listen to me good : the life story of an Alabama midwife.
CALL NUMBER: RG 962 E98 S65 1996 LOCATION: QEII

Smith, Roger Perry. (1997). Gynecology in primary care.
CALL NUMBER: WP 140 S658G 1997 LOCATION: HEALTH SCIENCES

Snyder, Mariah, & Michaelene P. Mirr. (Eds.). (1995) Advanced practice nursing : a guide to professional development.
CALL NUMBER: WY 128 A244 1995 LOCATION: HEALTH SCIENCES

Statistics Canada. Special Surveys Division. (1995). Survey on smoking in Canada, 1994 : [public use microdata file].
CALL NUMBER: [Computer File] LOCATION: QEII

Tomson, Torbj*orn et al. (Eds.). (1997). Epilepsy and pregnancy.
CALL NUMBER: WL 385 E624 1997 LOCATION: HEALTH SCIENCES

Wagman, Brenda. (1995). Smoking and pregnancy : a woman's dilemma.
CALL NUMBER: HV 5746 W34 1995 LOCATION: QEII

Wagner, Louis K, Richard G. Lester, & Luis R. Saldana. (1997). Exposure of the pregnant patient to diagnostic radiations : a guide to medical management.
CALL NUMBER: WQ 202 W133E 1997 LOCATION: HEALTH SCIENCES

<u>Neonatal</u>

Abuhamad, Alfred. (1997), A practical guide to fetal echocardiography / illustrations by Patricia Gast.
CALL NUMBER: WQ 210.5 A165P 1997 LOCATION: HEALTH SCIENCES

American Academy of Pediatrics. (1997). Guidelines for perinatal care.
Call number: WQ 210 G955 1997 LOCATION: HEALTH SCIENCES

Ball Jr, William S. (Ed.). (1997). Pediatric neuroradiology
CALL NUMBER: ON-ORDER LOCATION: HEALTH SCIENCES

Beischer, Norman A, Eric V. Mackay, & Paul Colditz. (1997). Obstetrics and the newborn : an illustrated textbook..
CALL NUMBER: WQ 100 B41O 1997 LOCATION: HEALTH SCIENCES

Fanaroff, Avroy A, & Richard J. Martin. (1997). Neonatal-perinatal medicine : diseases of the fetus and infant.
CALL NUMBER: WS 420 B4N 1997 V.1 LOCATION: HEALTH SCIENCES

Gilbert-Barness, Enid. (Ed.). (1997). Potter's pathology of the fetus and infant.
CALL NUMBER: WQ 210 P6P 1997 V.1 LOCATION: HEALTH SCIENCES

Govaert, Paul, & Linda S. DeVries with contributions from Frederik J.A. Beek & Frank Van Bel. (1997). An Atlas of neonatal brain sonography.
CALL NUMBER: WN 240 A881 1997 LOCATION: HEALTH SCIENCES

Inciardi, James A, Hilary L. Surratt, & Christine A. Saum. (1997). Cocaine-exposed infants : social, legal, and public health issues /
CALL NUMBER: WQ 211 I36C 1997 LOCATION: HEALTH SCIENCES

March of Dimes Birth Defects Foundation. (1997). StatBook : statistics for monitoring maternal and infant health.
CALL NUMBER: WA 900 AA1 M315 1997 LOCATION: HEALTH SCIENCES
CALL NUMBER: WA 900 AA1 M315 1993 LOCATION: HEALTH SCIENCES

Pernick, Martin S. (1996). The black stork : eugenics and the death of "defective" babies in American medicine and motion pictures since 1915.
CALL NUMBER: HQ 755.5 U5 P452B 1996 LOCATION: HEALTH SCIENCES

Roberton, N. R. C. (1996). A manual of normal neonatal care.
CALL NUMBER: WS 39 R642M 1996 LOCATION: HEALTH SCIENCES

Schatz, Michael, Robert S. Zeiger, & Henry N. Claman. (Eds.). (1998). Asthma and immunological diseases in pregnancy and early infancy.
CALL NUMBER: WD 300 A853 1998 LOCATION: HEALTH SCIENCES

Sparshott, Margaret. (1997). Pain, distress, and the newborn baby / foreword by Kathleen A. VandenBerg.
CALL NUMBER: WS 421 S737P 1997 LOCATION: HEALTH SCIENCES

Statistics Canada. Special Surveys Division (1996). National Longitudinal Survey of Children and Youth : public use microdata files.
CALL NUMBER: [Computer File] LOCATION: QEII

Swischuk, Leonard E. (1997) Imaging of the newborn, infant, and young child.
CALL NUMBER: WN 240 S9R 1997 LOCATION: HEALTH SCIENCES

Upledger, John E. (1996) A brain is born : exploring the birth and development of the central nervous system / illustrations by *Alice Quaid.
CALL NUMBER: QP 356.25 U65 1996 LOCATION: QEII

Wright, Linda, Gerald B. Merenstein, Deborah Hirtz. (Eds). (1996). Report of the Workshop on Acute Perinatal Asphyxia in Term Infants : August 30-31, 1993, Rockville, Maryland / Workshop on Acute Perinatal Asphyxia in Term Infants (1993 : Rockville, Md.)
CALL NUMBER: WQ 450 W926R 1993 LOCATION: HEALTH SCIENCES

Young, Thomas E., & O. Barry Mangum. (Eds.). (1996). Neo fax '98: a manual of drugs used in neonatal care.
CALL NUMBER: WS 39 Y77 1998 LOCATION: HEALTH SCIENCES

Infant Feeding

Canadian Paediatric Society, Dietitians of Canada, & Health Canada. (1998). Nutrition for healthy term infants.
CALL NUMBER: IN PROGRESS LOCATION: HEALTH SCIENCES

Cox, Janice Hovasi. (Ed.). (1997). Nutrition manual for at-risk infants and toddlers.
CALL NUMBER: WS 120 N977 1997 LOCATION: HEALTH SCIENCES

Golding, Jean, Imogen Rogers, & Pauline Emmett. (1997). Breast feeding : benefits and hazards. Early Human Development, 49 (Sup)
CALL NUMBER: Periodical LOCATION: HEALTH SCIENCES

Health Canada. (1997). Breastfeeding : a selected bibliography and resource guide.
CALL NUMBER: RJ 216 B74 1997 LOCATION: QEII

Audio-Visual Material

Bhatia, Esha. (1997). Protecting your newborn [videorecording - 26 min]. Discusses the precautions to take when traveling with a baby in a car and the choosing of a correct car seat.
CALL NUMBER: TL 159.5 P967 1997 LOCATION: HEALTH SCIENCES
CALL NUMBER: TL 159.5 P967 1997 Guide

Fedun, Karyn, Anna Ling, & Linda Plenerty. (1997). The Childbirth journey [videorecording - 43 min] : having your baby in Canada especially when from another country / produced by Sexuality Education Resource Centre [formerly Planned Parenthood Manitoba] and Malanka Productions Ltd.
Part 1. Preparing for your baby (14 min); Part 2. Having your baby (15 min);
Part 3. Bringing your baby home; the first 6 weeks (14 min).
Note: This film is made in Manitoba prior to midwifery legislation being introduced.

Frequent references are made to seeing both a midwife and a doctor. Once legislation is passed the midwife is able to request tests, prescribe routine medications, notify the birth; has hospital admitting and discharge privileges, and only refers to a physician when either the mother or baby have a problem, or the mother specifically requests this. If all is normal and the woman lives near to a hospital she may request to have either a hospital or a home birth with the midwife.
CALL NUMBER: WQ 150 C536 1997 LOCATION: HEALTH SCIENCES
CALL NUMBER: WQ 150 C536 1997 Guide

McRae, Margot. (1998). Unborn addicts [videorecording - 47 min] /
a presentation of Films for the Humanities & Sciences.
CALL NUMBER: WQ 240 U54 1996 LOCATION: HEALTH SCIENCES

Wuerger, Mardelle K. (1994). Examination of the school age child, 5 to 11 years
[videorecording - 39 min].
CALL NUMBER: WS 450 E96 1994 LOCATION: HEALTH SCIENCES

Wuerger, Mardelle K. (1995). Examination of the toddler/preschool child, 1 to 4 years
[videorecording - 46 min]
CALL NUMBER: WS 440 E962 1995 LOCATION: HEALTH SCIENCES

Wuerger, Mardelle K. (1994). Health screening examination of the adolescent, 12 to 19 years
[videorecording - 38 min].
CALL NUMBER: WS 460 H434 1994 LOCATION: HEALTH SCIENCES

Wuerger, Mardelle K. (1994). Health screening examination of the infant, birth to 12 months
[videorecording - 31 min].
CALL NUMBER: WS 430 H434 1994 LOCATION: HEALTH SCIENCES

Conferences. Information is sent by e-mail to those who have this method of communication so that early registration discounts can be obtained if a conference is going to be attended. As the information is obtained from various sources the editor accepts no responsibility for accuracy. Anyone interested in a conference should contact the organisers to ensure that the information is accurate.

September 21-22, 1998. "Natural Aspects of Childbearing", St. John's, NF. A Newfoundland and Labrador Midwives Association workshop. Speakers include: Robyn Beaudry and her research on labour support, Pamela Browne on optimal fetal positioning in pregnancy, Kay Matthews who will encourage participants to take part in providing labour support (wear slacks and bring a cushion), Janet Murphy Goodridge, lactation consultant, on the management of breast refusal in the early days after birth, Bonnie Stevens on developmental care of the newborn baby, Jean Trend on massage for mothers and babies
Cost: Before September 11 - for NLMA members $60 or $35 per day/ for non-members $80 or $45 per day. After September 11 - $100 or $55 per day for both members and non-members. Full time students and unemployed persons $20 per day.

Cheque: Newfoundland and Labrador Midwives Association. Send to: Pamela Browne, PO Box 112, Station A, Goose Bay, Labrador, A0P 1S0
Contact: Pearl Herbert, School of Nursing, Memorial University of Newfoundland, St. John's, NF, A1B 3V6 (Fax: 709-737-7037).

September 23, 1998. "Education Day: Focus on Paediatric and Neonatal Pain", St. John's, NF. Speakers include: Neil Schechter, MD (Hartford); Bonnie Stevens, RN (Toronto), Christina Rosmus, RN (Halifax).
Contact: Andrea Brennan, School of Nursing, Memorial University of Newfoundland, St. John's, NF, A1B 3V6 (Telephone: 709-737-7007; Fax: 737-7037; e-mail: Brennan@morgan.ucs.mun.ca)

September 26, 1998. "Homeopathy for Midwives and Labour Support Workshop, level 1", Calgary, AB. Sol Luna Homeopathy. One day intensive workshop designed for midwives, doulas, labour support, health care professionals and others. Instructor: Cathy Marricks, LCH.
Cost: $125.00
Contact: (Telephone: 403-640-2381).

October 1-2, 1998. "Women and Sex", Maine AWHONN Conference, Bar Harbor, ME. To identify and assess sexual dysfunction in women across the lifespan and demonstrate three simple techniques to assist women in dealing with situational stress. Cindy Osborne is the keynote speaker. Other speakers include Susan Kellogg-Spadt on breastfeeding and sex.
Cost: $125 US AWHONN members; $140 non-members.
Contact: Betty Cowing, RR4, Box 870, Oakland, ME 04963 (Telephone: 207-465-2510)

October 3-4, 1998. "DONA approved Labour Support Workshop", Ottawa.
Contact: Nicky Lawson (Telephone: 905-844-0503).

October 17-31, 1998. "DONA approved Labour Support Workshop", Kitchener, ON.
Contact: Jo-Anne Copeland (Telephone: 905-337-7679).

October 20, 1998. "The Unsung Heroine: The Nurse's Role in Maintaining Normalcy in Childbirth", Summerside, PEI. Speaker: Penny Simkin. Topics include: impact of childbirth on the woman and family, current research, coping with labour, identify and practice specific techniques of labour support and pain control. (Babies in arms welcome).
Cost: By September 2, 1998 - $65/ After September 2 - $90 (paid by October 6).
Cheques payable to Penny Simkin Conference.
Accommodation at the Loyalist Country Inn for $65 per night. Make own arrangements (1-800-361-2668).
Contact: Donna Walsh, Obstetrics Unit, Prince County Hospital, 259 Beattie Avenue, Summerside, PE, C1N 2A9 (Telephone: 902-436-9131; e-mail: djwalsh@ihis.org).

October 23, 1998. "Becoming Baby Friendly. How Media and Culture Influence our Breastfeeding Practices", Ottawa. A day with Gabrielle Palmer and Cheryl Levitt.
Cost: $50 by September 30. Space is limited. Payable to Current Trends '98..
Contact: Rejeanne McLean, Current Trends '98, 1114 St. Germain Crescent, Gloucester, ON, K1C 2L8 (Telephone: 613-824-3363

November 6-8, 1998. "Becoming a Doula: Labour Support Training Course", Edmonton, AB.
Contact: Grant MacEwan Community College (403-497-5188).

November 12-15, 1998. "Working Together to Chart our Course for the Future" MANA conference, Traverse City, Michigan. Speakers include: Beverly Beech, Barbara Katz-Rothman, Suzanne Arms, Celine Lemay, Anessa Maize, Mary Sharpe, and others.
Contact: Anessa Maize, MANA Canada, Box 26141, RPO Sherbrook, Winnipeg, MB, R3C 4K9 (Telephone: 204-779-3232; e-mail: amaize@pangea,ca).

November 19-21, 1998. "Breastfeeding: Stepping into Baby Friendly", Vancouver. Keynote speakers: Jan Riordan, Marsha Walker, Louise Hanvey, Patricia Martens, Frances Jones, Sunara Thobani, and members of the BCC including Bev Chalmers, Maureen Fjeld, Roberta Hewat, Cheryl Levitt, Verity Livingstone, Catherine Royle, Elisabeth Sterken and others.
Abstracts: By September 1 for poster session, related to programs, practices and research related to lactation, breastfeeding and infant feeding. All research must conform to the International Code of Marketing of Breastmilk Substitutes.
Cost: $225 for 2 1/2 days plus $125 for post-conference workshops.
Contact: British Columbia Reproductive Care Program, Room F5, 4500 Oak Street, Vancouver, BC, V6H 3N1 (Fax: 604-875-3747)

1999

February 5-7, 1999. "Becoming a Doula: A Labour Support Training Course", Saskatoon, SK.
Contact: Grant MacEwan Community College (Telephone: 403-497-5188)

March 7-9, 1999. "Becoming a Doula: A Labour Support Training Course", Saskatoon, SK.
Contact: Grant MacEwan Community College (Telephone: 403-497-5188)

April 13, 1999. "Research in Midwifery", Birmingham, England. Topics include primary research, methodological issues, systematic review of the literature, developing, implementing and evaluation of research change in practice and within Trusts (hospitals).
Abstracts: by July 31, 1998
Contact: Sue Cammerloher, Conference Administrator, 26 Moorside, Yatton, Bristol BS49 4RL (Fax: 011-44-1934-832-164)

April 23-25, 1999. RCN Research Society Annual Conference, Keele University, UK
Contact: Kathryn Clark, RCN, 20 Cavendish Square, London W1M 0AB (Fax: 011-44-171-647-3435; E-mail: kathryn.clark@rcn.org.uk; internet: http://www.man.ac.uk/rcn/conferences.html)

May 13-15, 1999. "Creating Harmony in the Global Village, Crossing Boundaries and Welcoming the World", AWHONN Canada 10th National Conference, Winnipeg, MB
Cultural aspects of women's health, obstetrical and neonatal nursing; vulnerable populations; technological advances and low tech alternatives.
Abstracts: By October 15, 1998. (On abstract form).
Contact: AWHONN Regional Conference 1999, 246 Bison Building, University of Manitoba, Winnipeg, MB, R3T 2N2.

May 22-27, 1999. 25th Triennial Congress of the International Confederation of Midwives, "Midwifery and Safe Motherhood Beyond the Year 2000", Manila, Philippines.
Abstract: Before January 29, 1999.
Cost: Before January 1999, $450 US
Contact: The Secretariat, 25th ICM Congress, c/o IMAP Inc., Golden Groove Street, Bartville Subd., Barangay Dela Paz, Pasig City, Philippines (Fax: 645-7148; 724-5335)
[The Royal College of Midwives is organizing group travel from London to Manila, and the cheapest package will likely be around £1,000. Those interested should contact the RCM Manila Club, 15 Mansfield Street, London W1M 0BE (Telephone: 011-44-1633-876767) for details].

May 26-29, 1999. "Shaken Baby Syndrome: Awareness, Prevention and Response", Saskatoon.
Abstracts: August 1, 1998.
Contact: Saskatchewan Institute on Prevention of Handicaps, 1319 Colony Street, Saskatoon, SK, S7N 2Z1 (Fax: 306-655-2511; e-mail: skiph@sk.sympatico.ca)

July 1999. Fourth International Conference on the Regulation of Nursing and Midwifery, London, England.

Information Sharing

The Royal College of Midwives Scottish Board commissioned a study from the Midwifery Research Group of the Department of Nursing and Midwifery Studies, University of Glasgow, regarding midwives' perceptions of and attitudes to woman centred care. For more information contact: Nursing and Midwifery Studies, University of Glasgow, 68 Oakfield Avenue, Glasgow G12 8LS (Fax: 011-44-141-330-3539; E-mail: omwlc@clinimed.gla.ac.uk)

The University of Surrey offers a MSc in Advanced Clinical Practice (Midwifery) to prepare students to be leaders in their own clinical field. The program consists of taught modules and a research project leading to the preparation of a dissertation (thesis). The programme starts in September and for full-time students it lasts one whole year.
Contact: The Postgraduate Admissions Officer, EIHMS, Stag Hill Campus. 24AD21, University of Surrey, Guildford GU2 5XH, England. (Fax: 011-44-1483-259748; e-mail: r.robertson@surrey.ac.uk; internet: http://www.surrey.ac.uk/EIHMS/)

From October 1998 the University of Edinburgh is providing a Masters of Science degree designed to provide students with the knowledge and skills required for research in reproductive health and for critical assessment of findings. Applicants should have a good university degree to be able to cope with a demanding programme, a medical qualification is not required.
Contact: Dr. Anna Glasier, University of Edinburgh, Department of Obstetrics and Gynaecology, 37 Chalmers Street, Edinburgh EH3 9EW, Scotland (Fax: 011-44-131-229-2408)

Canadian Childbirth Teaching Aids, 11716-267 Street, Maple Ridge, BC, V2W 1N9 (Fax: 604-462-0449; e-mail: ccta@uniserve.com; internet: http://www.webstorage.com/~ccta)
Catalogue of teaching materials; conference information; birth kits (standard $38; delux $52) would need to add own instruments e.g. scissors etc., resuscitation equipment etc. to meet legislation requirements.

The Family Planning Handbook for Health Professionals (1997) is recommended for midwives, doctors, nurses and others who provide contraceptive and family planning services and advice. $24 US, from International Planned Parenthood Federation, Regent's College, Inner Circle, Regent's Park, London NW1 4NS, UK (Fax:011-44-171-487-7950; e-mail: info@ippf.org; internet: http://www.ippf.org)

McHaffie, H. (1998). Gaining ethical approval: A necessity or an optional extra? *Midwifery, 14*(2), 101-104. A commentary on an article reporting breastfeeding research (Whelan & Lupton, pp.94-100). Consent and confidentiality is sometimes overlooked by researchers.

The *MIDIRS Midwifery Digest, 8*(2), June 1998, has several very interesting articles and commentaries regarding research. These include: Getting to know midwives (pp. 160-163); Babies, bruises and black eyes (pp. 170-171); Early vs mid-trimester amniocentesis (pp. 176-177); Sweeping the membranes (pp. 192-194); Active management of labour (pp. 196-200); Amniotomy to shorten spontaneous labour (pp. 201-202); Reducing perineal trauma (p. 203); Damage to the pelvic floor: Causes, prevention and treatment (pp. 225-227); Perineal trauma: How do we evaluate its severity (A look at the REEDA scale) (pp. 228-230); Anal incontinence after childbirth (pp. 231-233); Vitamin K - the debate continues (pp. 234-236); Kangaroo care: Why does it work (pp. 236-238); Softly, softly approach recommended for premature babies (p. 240); Neonatal assessment of babies conceived by in vitro fertilization (p. 240); Perinatal death: How fathers grieve (p. 241).

The *MIDIRS Midwifery Digest, 8*(3), September 1998, has more interesting articles including: Becoming a mother: Disabled women (can) do it too (pp. 275-278); Using homeopathy during pregnancy and labour (pp. 283-286); Research report: Do obstetric staff know when to call for assistance? (pp. 293-295); Overcoming the pelvic flaw: Exercises for continence. Preventing and treating incontinence (pp. 295-298); several articles on prenatal screening and consent for this (pp. 304-315); TIC-TAC therapy : A non-pharmacological stroking intervention for premature infants (pp. 379-372); Paternalism and the parent with an intellectual disability (pp. 382-384); several articles about breastfeeding.

UKCC (1998, Summer) *Register* has an editorial about midwives and nurses practising without registration after it has lapsed and about those who have been removed from the register or have never been registered. The UKCC has a new PIN card. There is *A Guide for Students of Nursing and Midwifery* which also reminds registered members that they are professionally accountable to the UKCC for students' actions and omissions. The 1999 guidelines for the UKCC research scholarship, worth £20,000 per year for two years, will be available early next year. All practising midwives will receive a copy of the new *Midwives Rules and The Midwives Code of Practice* (published in one volume); in October 1998 those who want a copy but are not practising will need to request a copy from the UKCC, 23 Portland Place, London W1N 4JT, England.

A copy of the *Proceedings* from the *Third International Conference on the Regulation of Nursing and Midwifery. Regulation Across Borders: Enhancing Public Service Through International Collaboration* (held June 12 and 13, 1997, in Vancouver) has been sent to each Canadian Midwives Association. The next meeting of this International Conference is in early July in London, England. It will be linked to the ICN anniversary celebrations which are taking place there immediately before the regulatory conference. [The Americas are represented by

Margaret Risk, Executive Director, College of Nurses of Ontario, 101 Davenport Road, Toronto, ON, M5R 3P1 (E-mail: cno@cnomail.org] Karene Tweedie, secretary, has the copy for the NLMA.

Did you Know? Telemedicine Canada no longer exists. Individual sites had to pay to participate in these calls, which included programmes from INFACT and other organizations

Snippets from the UK News (Daily Telegraph) collected by Pearl Herbert when she was on vacation.

The newspapers and the television had reports on tennis at Wimbledon, the World Cup football, golf, the July 1st opening of Althorp by the Earl of Spencer so that people could visit the Princess Diana museum, the Minister of Transport's suggestions for reducing the number of cars on the roads including making the motorways become toll roads. The rate of exchange was $2.47 Cdn for 1 pound stirling.

On health matters there were reports on the 50th Anniversary of the National Health Service (July 5, 1948) and whether or not universal free medical care can survive. Also the 20th anniversary of Louise Brown's birth (July 25, 1978) made possible because of in-vitro fertilisation (IVF) and the progress, and ethical and legal questions which have arisen since IVF has become more accessible, especially the use of sperm posthumously.

Questions regarding the causes of cancer have included ovarian cancer as a result of fertility drugs (July 14, p. 18). Companies are disclaiming that breast implants result in cancer as an independent review "could find no scientific evidence to link the silicone implants with abnormal immune response or the development of diseases such as arthritis, as has been claimed". It will now be mandatory for all doctors undertaking breast implant surgery to record every operation in a national register (8,000 women seek this surgery every year in Britain) (July 15, p.6). A surgeon in Scotland has been suspended from practice after being accused of performing breast surgery on at least 150 women without prior preliminary procedures such as mamograms and biopsies (July 17, p. 5).

Viagra is also in the news although it is not available in Britain. In 1991 Viagra was developed by British scientists at the Pfizer's research centre in Kent, to treat heart conditions. The drug was called sildenafil but was not a successful treatment and also it had severe side effects. There was no indication as to when erections would occur, plus the drug caused migraines, distorted vision, nose bleeds and backache. In 1994 changes were made to this drug with the idea of using it as treatment for impotence. After further changes in 1997 the drug was renamed Viagra ("virility" and "Niagara") (July 16, p. 19).

DNA tests are now available for private use. A £300 mail order from the DNA Testing Agency in Kent provides a kit so that a swab from inside of a child's cheek can be compared with a similar swab from the parent's cheek. The swabs are then sent for analysis to ascertain if a man could really be the father of a child. Apparently these tests are common in the US. The article did not state if there are false positives and negatives (July 14, p. 20). The St. John's *Express* (September 2, 1998, p. 1) had an article on "More Nflders. Getting paternity tests". The rate in this province has increased from 10 tests in 1982 to nearly 90 tests in 1996, and many are

adults seeking confirmation of their biological parents. The cost is approximately $950 a test, and the accuracy rate is more than 99%.

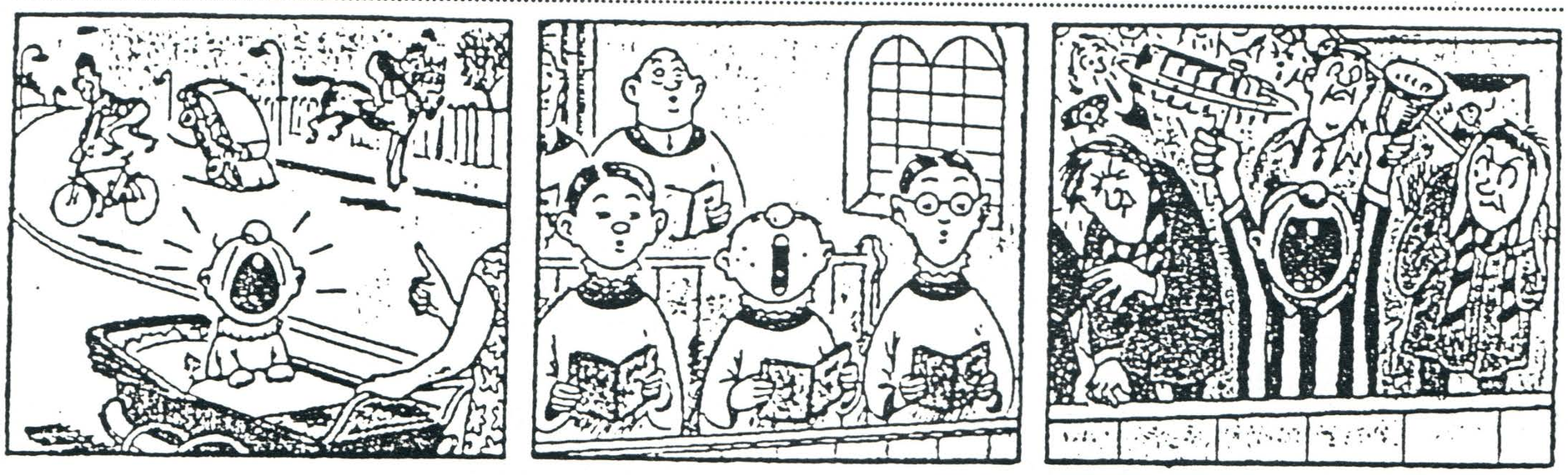
There are questions being raised as to whether or not mobile telephones, which emit micro waves, can harm the embryo/fetus. The National Radiological Protection Board state that radiation risks from cell phones and VDUs have never been properly assessed (June 29, p. 3).

A court found a registered child minder guilty of killing a five month old baby by shaking him. Shaken Baby Syndrome produces bruising around the neck, bleeding in front of the retina, and extensive bleeding in the brain similar to that seen following a road accident or a fall from a considerable height. Although the local authority had carried out the required investigations on the child minder it was not discovered that her three children from a previous marriage had been removed and that she had been charged with prostitution (all unknown to her present husband who had a heart attack when this was revealed in court). The woman had not given her previous married name and so the information was not shown during a computer check as to her suitability for child minding (July 15, p. 5).

It was reported that two separate research studies, in Denmark and in England, found that pregnant women who experience very stressful events have smaller babies with smaller head circumferences and lower scores on a rating of brain development. In monkeys such babies are more sensitive to stress and can become violent. Dr. Vivette Glover (London) said "that midwives should try to pick up psychological problems so there can be intervention. . . . It is very much how one responds to stress that matters. It depends very much on the mother's own physiology" (July 15, p. 11)

For the future? The Russians are putting a mirror satellite in orbit as a project to find if 24 hour daylight can be projected to Siberia to prevent 6 months darkness. Questions are being asked if this will effect the body's circadian rhythms and how it will effect reproduction. The mirror in this project is to pass over St. John's on November 9th (July 22, p. 1).

Sporting Sam Reg Wootton **Your comic companion throughout the World Cup**



Midwifery Now!

Newsletter of the Midwifery Coalition of Nova Scotia 1998
PO Box 33028, Halifax, NS B3L 4T6 (902) 429-5112
www.chebucto.ns.ca/Health/Midwifery

Spring !!

The Future

Exerpt from **The New Midwifery, *Reflections on Renaissance and Regulation,* Edited by Farah M. Shroff.**

What will the future hold for midwifery and how will it be for the next generation of girl children when they have children? The regulation of midwifery is inevitable. The losses and gains for women need to be scrutinized.

Perhaps the most beneficial effect of regulation will be that more women will receive women-centred care, choice of birthplace and continuity of care. These key concepts will provide increased satisfaction with the birth experience for women and their families. Highly personalized care lends more parental attachment to the birth process and strengthens the family unit. Some midwives believe that family support is a key ingredient toward excellent birth outcomes.

Funded midwifery opens care to all classes of people. Currently in Nova Scotia, clients must pay the fees for a midwife, thereby rendering the service unattainable for women likely to benefit most--poor women and teens. With funded midwifery, childbirth will take on a new social concept as unnecessary medicalized routines are avoided. Women will return to the idea that birth can be an empowering event in their lives. Child health will improve as babies are born into a gently environment and nourished with supported breastfeeding. A healthcare system for birthing that is based on midwifery will be less expensive than the status quo once the initial provisions for midwifery training sites are recovered.

With regulation, however, come concessions. Midwives, consumers and babies will clearly be affected by legislation. Concessions will mostly be made by clients of 'free midwifery' before regulation. Women may have fewer choices around birthing because of the regulating laws; home birth, for example, is threatened, at least in the preliminary stages of regulated midwifery practice, until backup systems are in place. The possibility of less appointment time and less personalized care exists as midwives are placed in high demand and practice loads increase. Potential clients may experience disappointment when accessing a midwife only to find the midwife completely booked and unable to take on new clients.

Certainly the midwife will gain more independence with the ability to order tests and prescribe medications. The midwife's services will be complete in its delivery to clients. Midwives will acquire more skills as competent caregivers with the expansion on duties provided for under a midwifery act. The midwifery profession as a whole will reach greater public profile with more acceptance from health professionals and the general public. The number of practising midwives will increase. In Nova Scotia, midwives will have more centralized work regions. At the moment, three practising midwives in Nova Scotia cover all the Atlantic Provinces. Training sites will be available for those seeking to become a midwife. Educational faculties will provide more opportunities for continuing education of midwives. Midwives will be paid for her work. To charge appropriately for the many hours involved in caring for a woman at the present time would make the price of midwifery services too high for most. Midwives hve worked too many years without full compensation. The practice of a midwife will include more support staff. A secretary will be available for office duties and midwifery students will assist the midwife.

Again, there will be downfalls to legislated practice for midwives. The initial costs for licensing will need to be paid. Thus far, these costs have come from the midwife's pocket. In Alberta, each midwife candidate paid $2750 to complete the first stage, a comprehensive assessment process. One midwife told me that is will cost her about $10,000 to do what she has already been doing for the last fifteen years.

As midwifery services become a standard care, midwives may be overworked initially with an increased number of clients combined with various committee obligations. As will, the restrictions on practice will affect midwives who previously practised in a free environment.

Midwives at work will be watched with a critical eye by other health professionals initially. There will be increased pressure on the midwife to always do the right thing. At the same time, more high-risk clients will access midwives, creating more stress for the midwife. The midwife's personal life will be affected with increased work stress. She will need to balance all of these factors as she continues her professional work.

Midwifery legislation is something I have strived for over many years despite some personal reservations. Women have the right to midwifery care. In my heart I keep coming back to the fact that more women and babies will receive better care with midwives. That thought keeps me on track with the sometimes discouraging political work. At the same time, I want to protect midwifery from domination by government and the medical community. I have a role in deciding the fate of midwifery for midwives and for birthing families. I respect and honour this role. I trust that those who have guided me thus far will remain my truth.

Reprinted, with permission, from the author Charlene MacLellan. *This was the last part of her chapter called* Midwifery in Atlantic Canada.

PRESS RELEASE

WABA World Breastfeeding Week, 1-7 August 1998

Breastfeeding: the best investment

The theme chosen by the World Alliance for Breastfeeding Action (WABA) for World Breastfeeding Week (WBW) 1998 *Breastfeeding: The Best Investment*, couldn't be more appropriate in view of the current economic situation faced in many parts of the world. The currency crisis in Asia, for example, has forced governments and families to take stock of the situation and pay attention to unnecessary expenditure and wastage of valuable resources, in order to find ways to be more cost effective. Even for countries not affected by the crisis, the significant role that breastfeeding plays in benefitting society cannot be ignored.

Through the theme, *Breastfeeding: the best investment*, WABA aims to raise awareness about the economic advantages of breastfeeding versus the high cost of bottle feeding, and initiate action to protect, promote and support breastfeeding as one of the best health investments in the future of any country.

Unlike bottle feeding, breastfeeding requires very little expenditure and has tremendous advantages for everyone. Households save, among other things, on unnecessary purchase of infant formula and equipment, and time taken to prepare such feeds. Families of the former Yugoslavia, for instance, would need to spend approximately 70% of their income for the purchase of breastmilk substitutes in the first six months if they did not breastfeed. In addition, families spend less on doctor's visits and hospitalisation as breastfed babies are always healthier.

Employers gain from better productivity and less absenteeism among breastfeeding workers because breastfed babies are sick less often than bottle-fed babies. The Director of Sanvita Programmes in the US, a corporate lactation support programme, says employers are beginning to see that breastfeeding makes economic sense. "Employers who want to retain valued employees, avoid turnover costs, and maintain a positive corporate image are adding worksite breastfeeding support programmes to their employee benefit packages". Through the Sanvita programme, businesses have been able to achieve up to a 4.5% return on their investments.

Nations also save in foreign exchange that would otherwise be wasted on importing infant formula and other baby foods as well as on higher health care expenditure due to not breastfeeding. In recessionary times like the ones now experienced by several Asian countries, using scarce foreign exchange for unnecessary imports is not only bad economic practice, but is becoming an impossible practice.

In Indonesia and the Philippines, the percentage of minimum wage spent on breastmilk substitutes (calculated for a 3 month old baby) is 50% and 26% respectively. Although Malaysians spend slightly less on infant formula (approximately 29% for rural workers and 19% for urban workers), the prices of powdered milks have gone up by 27% in March this year. Rising inflation means that these figures will only worsen, putting a greater burden on families and governments already suffering from overstretched budgets.

The costs of artificial feeding must also be seen in terms of greater health care expenditure for treating infant ailments like diarrhoea, respiratory infections, meningitis, allergies and digestive disorders. In the USA, the cost of treating diarrhoea as a consequence of not breastfeeding was a staggering US$ 291 million a year, while the cost of treating respiratory syncytial virus, otitis media and insulin dependent diabetes mellitus were $225 million, $660 million and $10 million respectively.

Breastfeeding on the other hand, ensures household food security, utilises a nation's natural resource, is ecologically friendly, reduces imports and thus saves on foreign exchange. Iran, for example, saved US$50 million in infant formula imports when exclusive breastfeeding increased by 43% over a six year period from 1991 to 1996. For each baby that is breastfed for six months, the US government estimates that it can save between US$450 to US$800 in welfare and health costs. And in Australia, the health care system would save A$11.5 million if exclusive breastfeeding up to 3 months of age is increased from 60% to 80%. These are just a few examples of the contribution breastfeeding can make in terms of food supply and savings to a nation.

Seeing such savings for all sectors of society, governments should no longer ignore the need to invest in breastfeeding and should immediately put into place a national breastfeeding programme.

WABA has identified three goals for this year's World Breastfeeding Week (WBW) campaign. They are to:

1. To raise public awareness on the economic value of breastfeeding and the high cost of bottle feeding;
2. To provide concrete data on the economic advantages of breastfeeding and the expense of bottle feeding to be used for public advocacy; and
3. To help governments appreciate the full economic value of breastfeeding and recognise the need to include support for breastfeeding promotion programmes in the national health budget.

Quantifying breastmilk as a valuable economic resource in terms of food supply to a nation, and as a cost saving measure, is one method of demonstrating its importance to responsible policy makers. But it must be remembered that economic data cannot reflect the expressions of love and bonding that come with the act of breastfeeding. Breastfeeding is a unique and natural gift to humanity and is worth far more than any economic value assigned to it. It is a right of all women and children. Let us begin to support this right now.

For more information contact:

WABA Secretariat, P.O. Box 1200, Penang, 10850 Malaysia.
Tel: 604-658-4816; Fax: 604-6572-655; email: secr@waba.po.my
or check the WABA website at http://www.elogica.com.br/waba
A copy of the WABA WBW 1998 action folder entitled
Breastfeeding: The Best Investment is enclosed for your perusal.

NEWFOUNDLAND and LABRADOR MIDWIVES ASSOCIATION
APPLICATION FOR MEMBERSHIP
1998

Name: _____
(Print) (Surname) (First Name)

All Qualifications: _____

Full Address: _____

_____

Postal code: _____ Telephone No. _____
(home)

Telephone No. _____ Fax No. _____
(work)

E-mail Address: _____

Work Address: _____

_____

Area where working: _____
Retired: _____ Student: _____
Unemployed: _____

List of Organizations of which you are a member (the Association receives requests from various organizations for representatives to review articles, attend conferences, be on committees). Your name would not be forwarded without your consent.

Provincial: _____

National:_____

International: _____

I wish to be a member of the Midwives Association and I enclose a cheque/money order from the post office for: $_____
(Cheques/money orders only (no cash) made payable to the Newfoundland and Labrador Midwives Association).

Membership for midwives is $30.00 (as this includes the Canadian Confederation of Midwives fees which the Association has to pay).
Membership for those who are not midwives is $15.00.
Membership for those who are unemployed/retired is $10.00
Membership for those who are residing outside of Canada $40 (to cover the extra postage).

Signed: _____ Date: _____

Return to: Pamela Browne, P.O. Box 112, Station A, Goose Bay, Labrador A0P 1S0